

# REMARKS

## I. RESTRICTION REQUIREMENT

Restriction was required under 35 U.S.C. 121 and 372.

According to page 2 of the Office Action restriction to a single invention was required because the claimed inventions were not linked to form a single inventive concept in accordance with PCT Rule 13.1. According to paragraph 2 of the Office Action the claims lacked a common technical feature that distinguished all claims from the prior art as required by PCT Rule 13.2.

The different inventions according to the Office Action were:

X-ray opaque glass claimed in original claims 1 to 13 (Group I);  
a process for making this glass claimed in claims 14 to 26 (Group II);  
use of the glass in dental applications claimed in claims 27 to 30 (Group III);  
use of the glass in optical applications claimed in claim 31 (Group IV);  
use of the glass in display technology claimed in claim 32 (Group V);  
a substrate glass for use in photovoltaics claimed in claim 33 (Group VI);  
a lamp glass claimed in claim 34 (Group VII);  
a substrate glass for biochemical applications claimed in claim 35 (Group VIII);  
a target material used in PVD processes claimed in claim 36 (Group IX);  
and

a glass fiber claimed in claim 37 (Group X).

However new claims 38 to 80 have been added above and the original claims 1 to 37 have been canceled. The new claims include claims for all ten groups, i.e. for all ten inventions, but include wording that distinguishes from the prior art mentioned on page 3 of the Office Action so that they now have “unity of invention” as required by PCT Article 13.1 and 13.2.

#### **A. PROVISIONAL ELECTION**

Applicants provisionally elect the Group I invention, namely the X-ray opaque glass composition, but respectfully traverse the requirement because the new claims 38 to 80 are believed to have a common technical distinguishing factor that distinguishes them from the prior art.

New claims 38 to 50 read on the provisionally elected Group I invention, namely the X-ray opaque glass composition.

New claims 51 to 68 claim the process for making the glass according to new composition claim 38 (Group II). The new process claims only include subject matter from canceled process claims 14 to 26.

The original “use” claims are in a form that is not permitted under the basic U.S. Patent Statute 35 U.S.C. 101 (Groups III to X). The original “use” claims and the associated description in the specification (pages 16 and 17) provide support for new article claims or method-of-using claims.

Accordingly new claims 69 to 72 read on the Group III invention of

canceled claims 27 to 30.

New “method-of-using” claims 73, 74, and 75 claims methods of using the glass of claim 38 for optical applications, in display technology, and in biomedical applications respectively. New claims 73, 74, and 75 contain subject matter from canceled claims 31, 32, and 35 respectively (Groups IV, V, and VIII).

New claim 76 claims a substrate glass for photovoltaics (Group VI) and is supported by canceled claim 33.

New claim 77 claims a lamp glass consisting of the glass of claim 38 (Group VII) and is supported by canceled claim 34.

New claim 78 claims a target material for a PVD process consisting of the glass of claim 38 (Group IX) and is supported by canceled claim 35.

New claims 79 and 80 claim glass fiber based on the glass of claim 38 (Group X) and are supported by canceled claim 37.

## B. COMMON DISTINGUISHING FACTORS

Claim 38 claims a glass having a composition in mol % of  $\text{SiO}_2$ , **75 - 98**;  $\text{Yb}_2\text{O}_3$ , 0.1 to 40; and  $\text{ZrO}_2$ , 0 to 40, **and which is free of  $\text{Al}_2\text{O}_3$  and free of  $\text{B}_2\text{O}_3$** . The bold face negative limitations are supported by the disclosure in the originally filed specification on page 5, lines 35 to 37. The raised lower limit for the concentration range of  $\text{SiO}_2$  is supported by examples 2, 4, and 5 on page 23 of the specification (Table1). This sort of concentration range change in a claim is supported by the policy set forth in M.P.E.P. 2163.05 III established by the US judicial decision in *In re Wertheim*, 191 USPQ 90 (CCPA 1976). Claim 38 was

drafted by adding the foregoing limitations to the original claim 1, which should be considered sufficient to further distinguish the claimed glass composition from the prior art described on page 3 of the Office Action, namely US Patents 4,562,161 and 6,128,430. The following section of the “REMARKS” describes the subject matter of these latter prior art references in more detail.

The other new claims contain the same common new distinguishing limitations as independent claim 38 so that, as required by PCT 13.2 and 37 CFR 1.499, they therefore have “unity of invention” and should be prosecuted in the same U.S. Patent Application.

In view of the foregoing reasons and the filing of the new claims withdrawal of the restriction requirement is respectfully requested.

## **II. RELATIONSHIP OF THE NEW CLAIMS TO US ‘161 and US ‘430**

### **A. Mennemann, et al**

**None** of new claims 38 to 80 are anticipated or obvious from the disclosures in Mennemann, et al, US Patent 4,562,161.

All the independent claims 1 to 5, 11, and 12 of Mennemann, et al, **require** B<sub>2</sub>O<sub>3</sub> in their claimed optical glass. The lowest lower limit for the concentration range of B<sub>2</sub>O<sub>3</sub> is 1 % by weight. The same can be said of the glass compositions recited in columns 2 to 5 of Mennemann, et al. Also the smallest amount of B<sub>2</sub>O<sub>3</sub> in the 19 examples in Table I is 1.05 wt. % (example 10). In other words, **all** embodiments of the glass of Mennemann, et al, must contain B<sub>2</sub>O<sub>3</sub>.

Also most embodiments of the glass of Mennemann, et al, must contain some  $\text{Al}_2\text{O}_3$ . Only examples 4 and 5 of US '161 out of the 19 examples do not contain  $\text{Al}_2\text{O}_3$ .

In contrast, claim 38 and the other claims exclude  $\text{B}_2\text{O}_3$  and also  $\text{Al}_2\text{O}_3$  because of the negative limitations in the last few lines of claim 38. A prior art reference that teaches the opposite from the claimed invention cannot be applied under 35 U.S.C. 103 (a) to reject the claimed invention as obvious.

Thus the subject matter of applicants' new claim 38 and also the subject matter of the dependent claims 39 to 80 are not obvious from Mennemann, et al.

For the foregoing reasons it is respectfully submitted that Mennemann, et al, **cannot** establish a case of *prima facie* obviousness of claim 38 and the dependent claims.

Accordingly claims 38 to 80 should not be rejected as anticipated under 35 U.S.C. 102 (b) or as obvious under 35 U.S.C. 103 (a) over Mennemann, et al, US Patent 4,562,161.

#### **B. Chu, et al**

**None** of new claims 38 to 80 are anticipated or obvious from the disclosures in Chu, et al, US Patent 6,128,430.

Chu, et al, claims and discloses an optical glass containing 0 to 90 mol % of  $\text{SiO}_2$ . See claim 1 of US '430 and their abstract. Chu, et al, would not anticipate the glass claimed in new claim 38 because the claimed concentration range for  $\text{SiO}_2$  is 75 to 98 mol %. Thus Chu, et al, does **not** teach the claimed

concentration range **with sufficient specificity** in accordance with the requirements of M.P.E.P. 2131.02 and 2131.03. Very broad generic disclosures do not anticipate individually claimed specific embodiments. Also none of the examples in Table I in columns 5 and 6 of Chu, et al, anticipate applicants' new claim 38, e.g. because no example has a SiO<sub>2</sub> concentration that falls within 75 to 98 mol % -- the largest is 70.19 mol % (example XII).

Furthermore Chu, et al, claims a glass composition that contains 5 to 40 mol % of Al<sub>2</sub>O<sub>3</sub> (see claim 1; abstract; column 5, lines 5 to 10). Thus Chu, et al, teaches **the opposite** from the claimed invention of claim 38 because they require at least 5 mol % of Al<sub>2</sub>O<sub>3</sub> in the glass according to their claimed invention, while claim 38 excludes any Al<sub>2</sub>O<sub>3</sub>. A prior art reference that teaches the opposite from the claimed invention cannot be applied under 35 U.S.C. 103 (a) to reject the claimed invention as obvious.

Also Yb<sub>2</sub>O<sub>3</sub> is a required ingredient in the case of applicants' claim 38 (lower limit 0.1 mol %), while claim 1 of Chu, et al, teaches a range of 0 to 5 mol % for Yb<sub>2</sub>O<sub>3</sub>. In addition, to being optional Yb<sub>2</sub>O<sub>3</sub> is not included in the examples in table I of Chu, et al.

For the foregoing reasons it is respectfully submitted that Chu, et al, **cannot** establish a case of *prima facie* obviousness of claim 38 and the dependent claims.

Accordingly claims 38 to 80 should not be rejected as anticipated under 35 U.S.C. 102 (b) or as obvious under 35 U.S.C. 103 (a) over Chu, et al.

### **III. GRANTED GERMAN PATENT**

A copy of a German Patent that was granted on the basis of the German Application, which is the priority document for the above-identified U.S. National Stage Application, accompanies this amendment. The German Patent was granted January 19, 2006.

### **IV. SPECIFICATION AND ABSTRACT**

The specification has been amended in accordance with US Patent Office Rules. Recommended section headings have been added to the specification. Blanket references to the claims in the "Summary of Invention" section have been deleted.

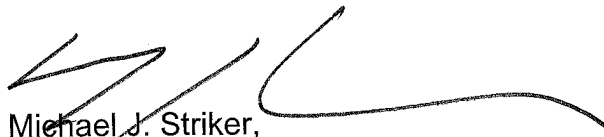
The paragraph running from page 13 to page 14 has been amended to properly designate the trademark TEFLON® and include a generic description of the product it represents. This generic description is available on the TESS trademark web site of the USPTO or can be found on the manufacturer's (DuPont) web site. New dependent claim 60 has been drafted accordingly.

An abstract has been provided because it was not provided with the original U.S. National Stage papers. The abstract summarizes the disclosure and includes subject matter regarding the process for making the X-ray opaque glass and the uses of the glass as well as the glass composition.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549 4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael J. Striker", with a long horizontal flourish extending to the right.

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